

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS, or other immune system disorders. Some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. EPA and Center for Disease Control guidelines, on appropriate means to lessen the risk of infection by *Cryptosporidium*, are available from the Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

Microbial Contaminants: Viruses, bacteria, and protozoan, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Microbial contaminants can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with compromised immune systems.

Inorganic Contaminants: Salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Certain inorganic contaminants consumed at levels in excess of the required MCL may result in skin damage, circulatory problems, liver problems, kidney damage, and increased risk of cancer.

Pesticides and Herbicides: Which may come from a variety of sources such as agriculture, storm-water runoff, and residential uses. Pesticides and Herbicides consumed at levels greater than the required MCL may result in increased risk of blood problem, reproductive difficulties, kidney and liver damage, and increased risk of cancer.

Synthetic and Volatile Organic Chemical Contaminants: Which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm-water runoff and septic systems.

Radioactive Contaminants: Which can be naturally occurring or be the result of oil and gas production and mining activities. Radioactive contaminants may result in an increased risk of getting cancer.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food

and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Revised Drinking Water Regulations

Arsenic – Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations. Epidemiological studies conducted in other countries indicate that high concentration of arsenic in drinking water, at several hundreds of parts per billion, have been shown to cause cancer. However there is insufficient data and information about lower levels of arsenic in the drinking water.

Recently the EPA lowered their standard for arsenic in drinking water from 50 ppb to 10 ppb, effective 2006. While your drinking water meets EPA's new standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

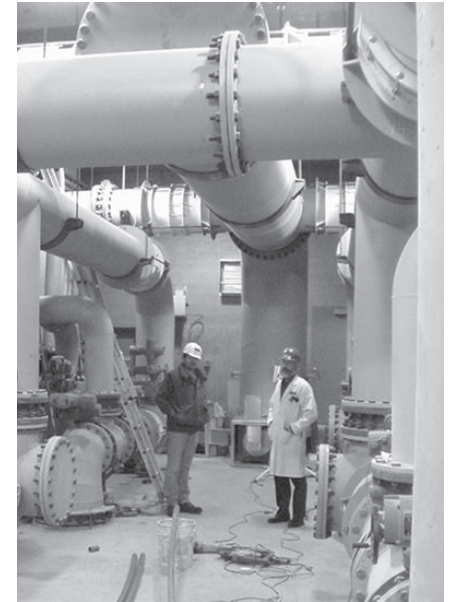
Haloacetic Acids – Haloacetic acids are disinfection by-products that are formed when chlorine is used as the disinfectant. These compounds can increase the risk of cancer, and became regulated as of January 1, 2002 with a MCL of 0.060 mg/L.

Maximum Residual Disinfection Level (MRDL) – Regulations for Maximum Residual Disinfection Level set a maximum limit for the running annual average MRDL at 4.0mg/L for chlorine. The average of samples taken in 2002 was 0.7mg/L chlorine, suggesting we shouldn't anticipate difficulty complying with this regulation.

TOC Removal Requirements – Control of disinfection by-product precursors has brought new regulations governing TOC removal requirements. TOC removal is accomplished through enhanced coagulation or enhanced softening. New regulations require a 50% TOC removal when the raw water TOC concentration is >8mg/L and alkalinity is <60mg/L. Violation shall occur when the ratio of the amount of actual TOC removal divided by the required amount of TOC removal is <1. The annual average TOC removal ratio for the year 2002 was 1.28. The range was 1.11 – 1.53.

Turbidity – As of January 1, 2002 the MCL for Combined Filter effluent was reduced to 1 NTU from 5 NTU for 100% of samples. The requirement for 95% of samples was reduced from 0.5 NTU to 0.3 NTU. Additionally, as of January 1, 2002 the Individual Filter effluent shall not exceed 1 NTU in two consecutive measurements 15 minutes apart, and shall not exceed 0.5 NTU in two consecutive measurements 15 minutes apart after 4 hours of continuous operation.

Thank you for reading this important information on your water's quality. We'll be happy to answer questions about the City of Flagstaff's water. Call Jack Rathjen at the Lake Mary Water Treatment Plant at (928-774-0262), or find information on your water system on the City of Flagstaff website at www.flagstaff.az.gov. Water quality data for community water systems throughout the United States is also available at www.waterdate.com.



The new filter building under construction at the Lake Mary Water Treatment Plant. Anticipated to come on-line April 2003

